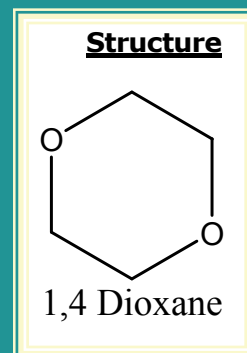


Procedure for Describing Process for Development of an Analytical Interim Practical Quantitation Levels (PQL)

1,4 Dioxane
CAS # 123-91-1



- 1) The health-based Interim Specific Ground Water Quality Criterion developed by Office of Science toxicologists is 0.4 ppb. For additional information, please see the Interim Ground Water Quality Criterion Document (IGWQC), for [1,4 Dioxane](#).
- 2) A Published Methods Database was searched to determine if the requested contaminant is a listed parameter in any analytical method. A variety of different organizations contribute to this database, for example; USEPA, USGS, APHA (Standard Methods), AOAC (Association of Official Analytical Chemists), and NIOSH (Air Methods).
 - a. National Environmental Methods Index (NEMI), is a free, searchable clearinghouse of methods and procedures for both regulatory and non-regulatory monitoring purposes for water, sediment, air and tissues. It is jointly funded by the U.S. Geological Survey and U.S. Environmental Protection Agency.
 - b. NEMI is used by Office of Science scientists to compare and contrast the performance and relative cost of analytical methods, review the full text of the procedure to determine implementation, and review sampling methods that require specialized techniques for environmental monitoring.

Basis for PQL

1,4-Dioxane appears as a listed parameter in a published USEPA Method 522 entitled; "DETERMINATION OF 1,4-DIOXANE IN DRINKING WATER BY SOLID PHASE EXTRACTION (SPE) AND GAS CHROMATOGRAPHY/ MASS SPECTROMETRY (GC/MS) WITH SELECTED ION MONITORING (SIM)." The published detection level (DL) range for water is 0.020 µg/L to 0.026 µg/L depending on the absorbent cartridge used to isolate this compound. Using the Department's standard practice for calculating a Practical Quantification Level this DL is multiplied by a factor of five (5) which results in a PQL value of 0.1 ppb.

See: National Environmental Methods Index (NEMI)

<http://www.nemi.gov/>

ISGWQC: 0.4 ppb

Interim PQL: 0.1 ppb

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Office of Science
10/08/2014